



## NUCLEAR REGULATORY COMMISSION

[Docket No. 50-0320; NRC-2023-0042]

**TMI-2 Solutions, LLC; Three Mile Island Nuclear Station, Unit No. 2**

**AGENCY:** Nuclear Regulatory Commission.

**ACTION:** Environmental assessment and finding of no significant impact; issuance.

**SUMMARY:** The U.S. Nuclear Regulatory Commission (NRC) is considering an exemption for license no. DPR-73, issued on February 8, 1978, and held by TMI-2 Solutions, LLC for the operation of Three Mile Island Nuclear Station, Unit No. 2, located in Dauphin County, Commonwealth of Pennsylvania. The NRC is issuing an environmental assessment (EA) and finding of no significant impact (FONSI) associated with the proposed action.

**DATES:** The EA and FONSI referenced in this document are available on April 24, 2023.

**ADDRESSES:** Please refer to Docket ID **NRC-2023-0042** when contacting the NRC about the availability of information regarding this document. You may obtain publicly available information related to this document using any of the following methods:

- **Federal Rulemaking Website:** Go to <https://www.regulations.gov> and search for Docket ID **NRC-2023-0042**. Address questions about Docket IDs in Regulations.gov to Stacy Schumann; telephone: 301-415-0624; email: [Stacy.Schumann@nrc.gov](mailto:Stacy.Schumann@nrc.gov). For technical questions, contact the individual listed in the "For Further Information Contact" section of this document.

- **NRC's Agencywide Documents Access and Management System**

**(ADAMS):** You may obtain publicly available documents online in the ADAMS Public Documents collection at <https://www.nrc.gov/reading-rm/adams.html>. To begin the search, select "Begin Web-based ADAMS Search." For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1-800-397-4209, 301-415-4737, or by email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov). The ADAMS accession number

for each document referenced (if it is available in ADAMS) is provided the first time that it is mentioned in this document.

- **NRC's PDR:** You may examine and purchase copies of public documents, by appointment, at the NRC's PDR, Room P1 B35, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852. To make an appointment to visit the PDR, please send an email to [PDR.Resource@nrc.gov](mailto:PDR.Resource@nrc.gov) or call 1-800-397-4209 or 301-415-4737, between 8 a.m. and 4 p.m. eastern time (ET), Monday through Friday, except Federal holidays.

**FOR FURTHER INFORMATION CONTACT:** Amy M. Snyder, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-6822; email: [Amy.Snyder@nrc.gov](mailto:Amy.Snyder@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

The NRC is considering issuance of an exemption for license no. DPR-73, issued to TMI-2 Solutions, LLC (TMI-2 Solutions, the licensee), from section 70.24 of title 10 of the *Code of Federal Regulations* (CFR), "Criticality accident requirements." The proposed action would exempt TMI-2 Solutions from the requirement to maintain a radiation monitoring system in each area where licensed special nuclear material (SNM) is handled, used, or stored that will energize clearly audible alarm signals if accidental criticality occurs during decommissioning.

As required by 10 CFR part 51, "Domestic Licensing of Production and Utilization Facilities," the NRC prepared an EA documenting its environmental review (ADAMS Accession No. ML23026A348). Based on the results of the EA and the summary that follows, the NRC has determined not to prepare an environmental impact statement (EIS) for the exemption and is issuing a FONSI in accordance with 10 CFR 51.32 "Finding of no significant impact."

TMI-2 Solutions requested an exemption from 10 CFR 70.24 requirements. In its exemption application, TMI-2 Solutions states that criticality is not credible at TMI-2, and

therefore it considers an exemption to 10 CFR 70.24 for a criticality monitoring system to be appropriate under the decommissioning licensing basis. The licensee stated that this is because of its updated Spent Fuel Mass Limit (SFML). Specifically, TMI-2 Solutions asserts that it arrived at this updated SFML by taking credit for impurities and actual enrichment based on the results of physical samples taken during the defueling effort in 1993. In its application, TMI-2 Solutions also asserts that administrative controls for geometric spacing are not necessary to further preclude a criticality accident because there is not enough Uranium Oxide (UO<sub>2</sub>) at TMI-2 to assemble an optimal critical configuration. Regardless, TMI-2 Solutions states that, as part of its Fuel Bearing Material Management Program, it will be implementing local administrative controls for the purpose of defense in depth of the activities which will handle the highest quantities of fuel bearing material.

## **II. Summary of Environmental Assessment**

### *Description of the Proposed Action*

The proposed action that is being considered by the Commission is an exemption during decommissioning from the requirements of 10 CFR 70.24 for a monitoring system capable of detecting a criticality accident.

The proposed action is in accordance with the licensee's application dated September 29, 2022 (ADAMS Accession No. ML22276A024).

### *Need for the Proposed Action*

The proposed action would exempt the licensee from the requirements of 10 CFR 70.24, which, in relevant part, requires that each licensee authorized to possess SNM in certain quantities maintain a monitoring system that will energize clear audible alarms if accidental criticality occurs in each area in which SNM is handled, used, or stored. The proposed action would also exempt the licensee from the requirements to maintain emergency procedures for each area in which this licensed SNM is handled, used, or stored to ensure that all personnel withdraw to an area of safety upon the sounding of the alarm, to familiarize personnel with the evacuation plan, and to

designate responsible individuals for determining the cause of the alarm, and to place radiation survey instruments in accessible locations for use in such an emergency.

#### *Environmental Impacts of the Proposed Action*

The NRC staff assessed the impacts of the proposed action on land use; visual and scenic resources/aesthetics; climatology; meteorology; air quality; noise; geology and soil; water; ecological resources; historical and cultural resources; socioeconomics; transportation and traffic; waste generation; and public and occupational health and safety. Approval of the proposed action would not result in an increased radiological risk to public health or the environment.

#### *Environmental Impacts of the Alternatives to the Proposed Action*

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Under the No-Action Alternative, the NRC would deny the requested action. Denying the action would have a larger environmental impact because occupational radiation exposure would increase due to personnel using radiation sources to calibrate criticality monitors during decommissioning.

#### *Alternative Use of Resources*

This action does not involve the use of any resources not previously considered in Supplement 3 to the Programmatic Environmental Impact Statement for TMI-2, dated August 1989, NUREG-0683. Additionally, the proposed action does not involve any environmental resources beyond those previously considered in the exemption for the 1992 Criticality Monitoring (57 FR 26668).

#### *Agencies and Persons Consulted*

On April 4, 2023, the NRC staff consulted with Commonwealth of Pennsylvania regarding the environmental impact of the proposed action. On April 14, 2023 (ADAMS Accession No. ML23107A223), the state official concurred with the draft environmental assessment and finding of no significant impact.

### **III. Finding of No Significant Impact**

On the basis of the EA referenced in Section II of this notice and incorporated by reference in this finding, the NRC finds that the proposed action will not have a significant environmental impact and that preparation of EIS is not warranted. Accordingly, the NRC has determined that a FONSI (ADAMS Accession No. ML23026A348) is appropriate.

Dated: April 26, 2023.

For the Nuclear Regulatory Commission.

**Shaun M. Anderson,**  
*Chief, Reactor Decommissioning Branch,*  
*Division of Decommissioning, Uranium*  
*Recovery, and Waste Programs,*  
*Office of Nuclear Material Safety and Safeguards.*

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